

NSLS OHSAS Job Risk Assessment

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Name(s) of Risk Team Members: W. DeBoer, M. Caruso, N. Gmür, C. Lanni	Point Value → Parameter ↓	1	2	3	4	5
Job Title: Work With Vacuum Systems Job Number or Job Identifier: LS-JRA-0008	Frequency (B)	≤once/year	≤once/month	≤once/week	≤once/shift	>once/shift
Job Description: Work with systems subject to vacuum pumps and pressures less than atmospheric	Severity (C)	First Aid Only	Medical Treatment	Lost Time	Partial Disability	Death or Permanent Disability
Training and Procedure List (Optional):	Likelihood (D)	Extremely Unlikely <<1x/20yrs	Unlikely 1x/10-20yrs	Possible >1x/10-20yrs	Probable 1x/yr	Multiple >1x/yr
Approved by: W. R. Casey Date: 8/12/2005 Rev. # 1 Revision Log						
Stressors (if applicable, please list all):		Reason for Revision (if applicable):			Comments:	

		Before Controls							After Initial Controls						After Additional Controls					
Job Step / Task	Hazard	Stressors Y/N	# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD	Initial Controls	# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD	Control(s) Added to Reduce Risk	# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD	% Risk Reduction
Operation of vacuum systems	Electrical shock	N	1	4	5	3	60	Proper grounding, feed-through protectors, strain relief, power cord condition, inspect equipment, Tier 1	1	4	5	1	20							

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	Release of toxic materials due to vacuum failure e.g., Beryllium window	N	1	4	2	4	32	NSLS Beryllium Mgmt. PRM, work permit, window inspections, vacuum interlocks	1	4	1	3	12							
	Inhalation of oil mists	N	1	4	2	4	32	Mist eliminators, venting to hoods or outdoors	1	4	1	3	12	Replace oil pumps with oil-free pumps	1	4	1	1	4	67%
Assembly or disassembly of vacuum system components	See LS-JRA-0014 for Hand Tool Use																			
	Bending, twisting, overexertion, dead-lifting, repetitive motion, working in areas with restricted access resulting in bumps and abrasions	N	1	3	3	4	36	Proper lifting techniques, back safety training (if applicable), coordination with co-workers, work planning, gloves	1	3	2	3	18							
Leak checking vacuum system	See LS-JRA-0009 for Work with Compressed Gas Cylinders or Systems																			
Maintenance of vacuum pumps	See LS-JRA-0014 for Hand Tool Use																			
	Bending, twisting, overexertion, dead-lifting, repetitive motion	N	1	3	3	3	27	Proper lifting techniques, back safety training (if applicable), coordination with co-workers, work planning, gloves	1	3	2	2	12							

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	See LS-JRA-0021 for Use of Commercial Chemical Products (Exposure to oils)																			
Bleeding up vacuum systems	Use of liquid nitrogen boil-off from dewars	N	1	2	2	3	12	Insulated gloves, eye protection, appropriate clothing, knowledge of dewar use, Cryogen Safety CBT	1	2	1	2	4							
Baking out	See LS-JRA-0007 for Resistive Heating Using Heating Tapes or Cal Rods																			
Transporting dewars in trucks	Dewar tips over and releases cryogen and/or injures worker	Y	1	2	3	4	24	Properly secure dewar to truck bed/frame, following Ackerman's recommendations, use open bed truck (not enclosed van)	1	2	2	2	8							
Further Description of Controls Added to Reduce Risk:																				
*Risk:		0 to 20 Negligible		21 to 40 Acceptable				41 to 60 Moderate				61 to 80 Substantial				81 or greater Intolerable				